

WORKSHOP NOTICE WITH AGENDA, WebEx & CONFERENCE CALL INFORMATION

Public Workshop Notice: Safety & Enforcement Division Workshop in accordance with Track 1 of Proceeding - R.15-03-011

Date: August 19, 2015

Time: 10:00 AM (PST)

California Public Utilities Commission

505 Van Ness Avenue, Auditorium

(Corner of Van Ness Avenue and McAllister Street)

San Francisco

Conference Phone Line: [866-859-2737]

Participant Code: [1682922]

WebEx information:

Go to <https://van.webex.com/van/j.php?MTID=mdf26e5b7b99c751db3c6770fd976c8df>

Meeting Number: [742 051 947]

Meeting Password: Safe2015!

Objective of the workshop is to: (1) discuss eligibility of new energy storage technologies in the energy storage proceeding, (2) discuss codes, standards, and regulations for energy storage safety in the proceeding, (3) recount utility and non-utility experiences installing and operating energy storage devices for a wide range of applications.

ENERGY STORAGE WORKSHOP AGENDA

Introduction- Safety and Enforcement Division and Energy Division	10:00 AM – 10:05 AM
Eligibility of Energy Storage Technologies (TRACK 1) Energy Division update on comments filed regarding Eligibility of Energy Storage Technologies (Track1). Questions and Brief Comments from parties that wish to comment on this topic.	10:05 AM – 10:20 AM
Standards Safety of Energy Storage Technologies What is developing in regard to codes and standards? What are the utility experiences so far? Brief discussion of recent safety incidents and of the DOE/Sandia ESS Codes & Standards Working Group.	10:20 AM – 10:30 AM
1) Standards and Certification for Safety of Energy Storage <i>Speakers: Laurie Florence of Underwriters Laboratories & David Rosewater of Sandia National Labs</i>	10:30 AM – 11:30 PM

<ul style="list-style-type: none"> a) UL 9540 standard for stationary storage and other codes. b) Energy Storage Integration Council, guidebook and lessons learned and a possible unified standard for installation of energy storage. c) National Fire Protection Codes. 	
NETWORKING BREAK	11:30 AM – 11:45 AM
2) Non-IOU experience with energy storage <i>Speaker: Paul Aggarwal of GreenCharge & California Energy Storage Alliance (CESA)</i> <ul style="list-style-type: none"> a) What are the non-IOU experiences with installing and operating storage devices for a wide variety of applications? b) How should safety standards be effectively monitored and communicated with the Commission and the public? 	11:45 AM – 12:30 PM
LUNCH	12:30 PM – 1:30 PM
3) IOU Presentations on Safety of Energy Storage <i>For SDG&E: Neal Bartek, Distributed Energy Resource Manager</i> <i>For SCE: Loic Gaillac, Manager in the Energy Storage Group for the Advanced Technology Division</i> <i>For PG&E: Jon Eric Thalman, Director in the Regulatory Strategy & Transmission Asset Management Group</i> <ul style="list-style-type: none"> a) What are the utilities' experiences installing and operating storage devices for a wide variety of applications? b) What utility safety standards and certifications are applicable to energy storage devices connected to the distribution grid, located at utility substations, or co-located with power generation facilities? c) How should safety standards be effectively monitored and communicated with the Commission and the public? 	1:30 PM – 3:45 PM
NETWORKING BREAK	3:45 PM – 4:00 PM
4) Discussion <ul style="list-style-type: none"> a) What inspection protocols or checklists should SED add to its substation and generation facility inspections? b) Potential changes to G.O. 167 and 174? c) Next Steps for SED and energy storage safety. 	4:00 PM – 4:30 PM

Other Information:

For procedural details relating to the proceeding (R.15-03-011), commenting and the record development process, and the role of this workshop within the proceeding, please refer to the "Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge," issued on June 12, 2015.

The memo can be found at this link:

<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M152/K484/152484522.PDF>

The subsequent "Administrative Law Judge's Ruling Modifying Track 1 Schedule," issued on June 19, 2015, can be accessed via the following link:

<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M152/K869/152869416.PDF>

The contact person for this workshop is Hal Kane of the Commission's Safety and Enforcement Division. He can be reached at hal.kane@cpuc.ca.gov or 415-703-2256.

Biographies

Laurie Florence is UL's principal engineer for Large Format Batteries, Fuel Cells and Capacitors. She has responsibility for technical input, determining technical competency criteria for UL staff and supporting UL's certification programs for her categories of responsibility. Ms. Florence is also UL's representative on a number of domestic and international committees and organizations. Since joining UL in 1990 as an engineer, Ms. Florence has worked in numerous categories, including a variety of motor-operated appliances, laboratory and information technology equipment, and gas and oil equipment.

David Rosewater is Research & Development Scientist & Engineer, Electrical Engineering, Sandia National Laboratories. Mr. Rosewater is a key member of the Sandia Energy Storage Safety Validation team where he uses the US Department of Energy's Energy Storage Test Pad (ESTP) located at Sandia National Laboratories to characterize AC integrated energy storage systems up to 1MW in size. Mr. Rosewater holds a Professional Engineering license in the state of New Mexico with a specialty in electrical power engineering. Prior to moving to the stationary energy storage sector at Sandia National Laboratories in 2011 Mr. Rosewater spent three years working with the Idaho National Laboratory developing advanced spectral impedance measurement techniques for hybrid vehicle batteries. He obtained his master's degrees in electrical engineering from Montana Tech. Areas of Expertise: Energy Storage Testing, Experimental Design, Data Collection and Analysis, Engineered Safety, and Power Engineering Theory, Modeling & Application.

Paul Aggarwal is the Senior Vice President of Operations at Green Charge Networks. He is a seasoned executive with more than 25 years of experience. Paul is dedicated to ensuring products and services meet the highest standards of quality. Prior to Green Charge, Paul worked at Cupertino Electric, Inc (CEI) leading the company's fastest-growing division, Energy Alternatives. With years of construction industry experience, Paul is skilled at managing and training estimators, project managers and project engineers. His experience as vice president of operations, pre-construction and estimating has given him the extensive budget management and competitive intelligence skills to drive the success of CEI's Energy Alternatives Division. Since joining CEI in 1989, Paul has played a significant role in CEI's construction and installation of electrical and solar projects nationwide. Paul has worked on a diverse range of large, complex information technology, solar, and power industry projects, including the Solar Star 2 and PG&E solar projects. He holds a bachelor's degree in industrial technology from San Jose State University and a master's degree in business administration from Santa Clara University.

Neal Bartek is the Distributed Energy Resource Manager for San Diego Gas & Electric. In his current role, he is responsible for leading the development, refinement and implementation of SDG&E's DER strategy, vision and policy. During his more than 15 years in the electric industry, he has held various leadership and technical positions in numerous areas including electric design, construction and

operations. He is a graduate of Cornell University with a Bachelor of Science degree in Operations Research & Industrial Engineering.

Loic Gaillac is managing the energy storage group for the advanced technology division of Southern California Edison. The group evaluates advanced energy storage systems in cooperation with manufacturers, government, and industry organization. Mr. Gaillac has managed projects to evaluate advanced energy storage for stationary applications including residential energy storage, distributed system for grid support, and large energy storage systems as well as for transportation applications such as plug-in electric vehicles. Before joining SCE, Mr. Gaillac was employed by Peugeot Societe Anonyme, the French automaker. Mr. Gaillac has a B.S. degree in Electrical Engineering and an M.S. degree in Power Electronics and Control Systems from a leading graduate school in France.

Jon Eric Thalman is Director in the Regulatory Strategy and Transmission Asset Management Group at Pacific Gas and Electric Company. His department supports PG&E's Transmission Owner and General Rate Case regulatory filings and supports strategy and policy development for new electric transmission and distribution technologies. During Jon Eric's 15-year tenure, he has participated in planning the bulk electrical transmission system as well as developing planning methodologies, standards, and applications with the Western Electricity Coordinating Council, North American Electrical Corporation, California Independent System Operator, and with the California Transmission Planning Group. He has developed a variety of electric transmission projects, including the Path 15 500 kV Line Upgrade and Remedial Action Scheme and two NAS Battery Energy Storage System pilot projects.